



## PATENT APPLICATION

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q80999

Mayumi TAKAMORI, et al.

Appln. No.: 10/827,448

Group Art Unit: 1752

Confirmation No.: not yet assigned

Examiner: not yet assigned

Filed: April 20, 2004

For:

NOVEL ORGANOMETALLIC IRIDIUM COMPOUND, PROCESS OF PRODUCING

THE SAME, AND PROCESS OF PRODUCING THIN FILM

## <u>INFORMATION DISCLOSURE STATEMENT</u> <u>UNDER 37 C.F.R. §§ 1.97 and 1.98</u>

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents, other than any U.S. patents and patent publications, is submitted herewith.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

INFORMATION DISCLOSURE STATEMENT

U.S. Appln. No.: 10/827,448

Attorney Docket No. Q80999

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement

under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for

foreign language documents, Applicant submits the following explanations: An English

language abstract and machine translation, submitted herewith, constitute a concise statement of

relevance for JPA No. 11-292288.

The publication date of the Morozova et al. document listed on page 2 of the Form

PTO/SB/08 is not readily available to Applicant.

The submission of the listed documents is not intended as an admission that any such

document constitutes prior art against the claims of the present application. Applicant does not

waive any right to take any action that would be appropriate to antedate or otherwise remove any

listed document as a competent reference against the claims of the present application.

Respectfully submitted.

Registration No. 32,765

Brett S. Sylveste

SUGHRUE MION, PLLC

Telephone: (202) 293-7060

Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

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Date: October 7, 2004

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	P E	11 1449 A & B/PTO			Application Number	10/827,448			
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	₹\sT	ATEMENT BY	APPLIC	CANT	Filing Date	April 20, 2004			
OCT	0 7 2004 ප				First Named Inventor	Mayumi TAKAMORI			
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1	TRADEM Sheet	1	of	2	Attorney Docket Number	Q80999			

U.S. PATENT DOCUMENTS										
Examiner Initials*	Cite No.1	Document Number	Number Kind Code <sup>1</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document					
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Examiner	Cite	Foreign Patent Document			Publication Date	Name of Patentee or	T6
Initials*	No.1		Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	Translation
		JР	11-292888	Α	10-26-1999	Kojundo Chem. Lab Co., Ltd.	Abstract

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		CHAPMAN AND HALL, "Dictionary of Organometallic Compounds", vol. one, Ag-Mn, Iridium entry, pp. 1152-1197, 1984	
		WILKINSON, et al., "COMPREHENSIVE ORGANOMETALLIC CHEMISTRY, The Synthesis, Reactions and Structures of Organometallic Compounds", vol. 5, pp. 303-419, 1982	
		ABEL, et al., "Comprehensive Organometallic Chemistry II, A Review of the Literature 1982-1994", vol. 8, Cobalt, Rhodium, and Iridium, pp. 541-628, 1995	
		SHIMIZU, et al., "MOCVD OF Ir AND IrO <sub>2</sub> , THIN FILMS FOR PZT CAPACITORS", Materials Research Society Symp. Proc. vol. 655, pp. CC1.10.1-CC1.10.6, 2001	
		ONDERDELINDEN, et al., "Chloro- and Bromo-(alkene)iridium(I) Complexes", Inorganica Chimica Acta, vol. 6:3, pp. 420-426, September 1972	
		WINKHAUS, et al., "Iridium(I)-Olefinkomplexe", Chem. Ber. vol. 99, pp. 3610-3618, 1966	
		ORO, "π-Cyclopentadienyl(butadiene)iridium(I)", Inorganica Chimica Acta, 21 (1977) L6	
		MÜLLER, et al., "π-Olefin-Iridium Komplexe, XIX *. Synthese, Struktur and Reaktivität von Bis(dien)iridium-benzyl-, cyclopropyl-, -vinyl- und -cyclopentadienyl-Komplexen", Journal of Organometallic Chemistry, 471 (1994) pp. 249-258	
		JOHNSON, et al., "Reactivity of Co-ordinated Ligands. PartXIII. Electrophilic Substitution Reactions of Cyclohexa-1,3-diene Complexes of Rhodium(I) and Iridium(I)", J.C.S. Dalton, pp. 2084-2089 (1972)	
		MÜLLER, et al., "π-OLEFIN-IRIDIUM KOMPLEXE IV. UMSETZUNGEN VON CHLORO-DIEN-IRIDIUM-VERBINDUNGEN MIT LITHIUMORGANYLEN", Journal of Organometallic Chemistry, 191 (1980) 303-311	
		GREEN, et al., "He I and He II Photoelectron Spectroscopic Studies of the Bonding in Cobalt, Rhodium, and Iridium Cyclopentadienyl Diene Complexes", Organometallics, 1984, 3, 211-217	

Examiner Signature	Date Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Stitute for Form 14.	19 A & B/F I O			Application Number	10/827,448	
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				Filing Date	April 20, 2004	
				First Named Inventor	Mayumi TAKAMORI	
(us	e as many shee	ts as necessar	v)	Art Unit		
				Examiner Name		
Sheet	2	of	2	Attorney Docket Number	Q80999	

	U.S. PATENT DOCUMENTS								
		Document Nu	mber						
Examiner Initials*	Cite No. <sup>1</sup>	Number	Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document				

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document		Publication Date	Name of Patentee or	Translation <sup>6</sup>				
Initials*	No.1	Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> MM-DD-VVVV Applicant of Cited Document	Translation					

Examiner Initials*	Cite No.1	journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.						
	-	MOSELEY, et al., "Pentamethylcyclopentadienyl-rhodium and -iridium Halides. Part III. Reactions with Cyclohexadienes", J. Chem. Soc., 1970, pp. 2884-2889						
		HOKE, et al., "Low-temperature Vapour Deposition of High-purity Iridium Coatings from Cyclooctadiene Complexes of Iridium, Synthesis of a Novel Liquid Iridium Chemical Vapour Deposition Precursor", J. Mater. Chem., 1991, 1(4), 551-554						
		MOROZOVA, et al., "Thermal Properties of Ir(I) Precursors: Acetylacetonato(1,5-Cyclooctadiene)Iridium(I) and (Methylcyclopentadienyl)(1,5-Cyclooctadiene)Iridium(I)", Institute of Inorganic Chemistry of Siberian Branch of Russian Academy of Sciences						
		WINKHAUS, et al., "Iridium (I)- Diolefinkomplexe", Z. Naturforschg. 20b, 602-603 (1965)  BEZRUKOVA, et al., "Cyclohexa-1, 3-diene in Synthesis of ή <sup>4</sup> -diene', ή <sup>3</sup> -dienil and ή <sup>6</sup> Arene derivatives of platinum metals, Nesmeyanova Institute of element-organic complexes, Academy of Science, USSR, pp. 2071-2076 (1986)						

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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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